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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/731,999 | 12/10/2003 | Daniel Laurent | 03161.001510 | 5862 |
| 5514 | 7590 | 05/06/2005 | EXAMINER | |
| FITZPATRICK CELLA HARPER & SCINTO | | | YEAGLEY, DANIEL S | |
| 30 ROCKEFELLER PLAZA | | | ART UNIT | |
| NEW YORK, NY 10112 | | | PAPER NUMBER | |
| | | | 3611 | |

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/731,999 | Applicant(s) LAURENT ET AL. | |
| | Examiner Daniel Yeagley | Art Unit 3611 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 13 and 15-17 is/are rejected.
- 7) ☐ Claim(s) 9-12 and 114 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/10/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “structural platform comprising a device supplying in parallel several non-adjacent cells, through specific orifices being provided with valves which provide a seal after filling” as cited in claim 6 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

2. The drawings are objected to because the Roman numeral “IV” in figure 2 appears to be an error and should be change to Roman numeral --III--. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because the form and legal phraseology often used in patent claims, such as "means" and "**said**," should be avoided.

Correction is required. See MPEP § 608.01(b).

4. The disclosure is objected to because of the following informalities:

Page 3, paragraph [9], the phrase "section along IV-IV in figure 3" should be change to --section along III-III in figure 2.

Appropriate correction is required.

Claim Objections

5. Claims 9 and 15 are objected to because of the following informalities:

Regarding claim 9, line 6, the term "said orifices" lacks proper antecedent basis.

Regarding claim 15, line 1, the term "the floor" lacks proper antecedent basis.

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Neither the drawings nor the description disclosed a structural platform comprising a device supplying in parallel several non-adjacent cells, through specific orifices with the device being provided with valves which provide a seal after filling as claimed and therefore it is impossible to conclude what the metes and bounds are for such a limitation.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 3 – 8, 13 and 15 - 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Izuchukwu et al '075.

Izuchukwu discloses a vehicle (figure 11) equipped with a structural platform with a floor forming at least partially a bearing structure on which various components of the vehicle are mounted; as best understood, wherein the structural platform (column 10 - 11, line 24 – 9) forms a tank comprising a fuel cell providing the storage of gaseous hydrogen (column 11, line 21-38, figure 6 and 12 – 14), and integrates a second independent tank for storing another different fluid

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(oxygen; column 7, line 41-42) in which, between the tank 326 beneath the vehicle and the second tank 310, a separation area with no cells is left (figure 11), the fuel cell and two tanks integrated in the structural platform, one tank providing the storage of gaseous hydrogen and the other tank providing the storage of gaseous oxygen, the tanks comprise at least one network of substantially cylindrical cells 146 or 314 connected together via interconnections 148 or 316 (figure 9 and 14, column 2), such that each cell of the tank has a central part whose wall is substantially cylindrical and a cap 76 at each end as broadly claimed (figure 6), wherein the interconnections (orifices) are conformed so that a flow of fluid by the consumption of fluid would exhibit only pressure drops that would not affect the use, and in an event of rupture of one or more cells, leakage flow would cause sufficiently high pressure drops to limit the flow rate thereof (column 6, line 15-30), and wherein the structural platform of Izuchukwu further shows tanks having several networks of cells connected in series with the networks connected in parallel (figure 7), and as best understood; comprises a device which supplies in parallel several non-adjacent cells, through specific orifices 104, such that the device is provided with valves 88 and 90 that provide a seal after filling.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Izuchukwu et al '075 in view of Kagatani '231.

Izuchukwu discloses a power device being a structural platform forming a tank comprising at least one network having a multiplicity of cells connected together by interconnections as stated above, but failed to disclose at least one network of at least a hundred and no more than a hundred thousand cells connected together via interconnections.

Kagatani is cited as an example of a power device having a multiplicity of fuel cells that incorporates the use of at least a hundred cells connected together by interconnections as broadly claimed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified at least one of the networks of Izuchukwu tanks with at least a hundred and no more than a hundred thousand cells dependent upon the size of the cell and the amount of power needed by connecting cells together in series to create the necessary power as is well known and to obtain optimum efficiency in the operation of the fuel cell as suggested by Katatani.

Allowable Subject Matter

12. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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13. Claims 9 – 12 would be allowable if rewritten to overcome the claim objection of claim 9, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter: none of the reference found alone or in combination disclosed a structural platform having a base comprise of as many recesses as there are cells, wherein the base has a flattened shape having a first face and an opposite face substantially parallel to the first face, such that the recesses all extend from the first face to the opposite face and all the recesses opening out at the first face and not opening out at the opposite face, and such that each recess being closed by a cover sealingly fixed so as to form a cell with the orifices being provided in the base in order to put the recesses in communication as claimed.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Smith '660, Wozniak et al '962, Puch 418, Polletta et al '267, Engel et al '548 and Joitescu et al '163 show a vehicle having a structural platform forming a tank.

Kato et al discloses fuel cell vehicle with a multitude of cells in excess of a hundred.


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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Yeagley whose telephone number is (571)-272-6655. The examiner can normally be reached on Mon. - Fri; first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley D Morris can be reached on (571) - 272 - 6651. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D.Y.


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